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Comp 4150: Advanced and Practical Database Systems

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Purpose of Application

The project "Employee Records Management system" is an application with various functions that allow users to manage the employee data in a faster, easier way while reducing the problem that is faced by practicing manual system. Today the computer is performing all the traditional functions of records management and managing records in ways that were not feasible before the computer age. Most institutions like academic, governmental, and commercial institutions need some system to address questions related to tracking and storing of data about their employees. This system is designed to help companies that need to have employee database management to carry out its operations in a smooth and effective manner.

The web-based database application reduces error while the user input the data by showing the error message. When the user accidentally inputs the wrong employee social security number or invalid employee social security number the system will output the employee does not exist. Another advantage of this web-based database application is that it is user friendly as no prior training is required to use this system. The overall purpose of this project is to design a reliable employee records management system that will replace the slow, unreliable, insecure manual way of managing employee records. Hence, establishing the system design models required to create a properly functioning system is important.

Our team implements the system design and tests its functionality to make sure we satisfy the system functionality needs and debug any errors that we faced in the process.

Features of the System

The features our Employee Records Management Systems are:

- User friendly. Easy to use and no training required
- System is compatible with most of the web browsers
- Save users' time
- System is highly interactive
- Reduce paper work
- Result is highly accurate
- Data manger can view all the records whenever
- The System can easily get upgraded to do more functionalities
- Information can easily be modified

Our Employee Records Management System comes with various features that involves data capture, store, retrieval, and storage of employee information. The system comes in place to replace hard paper form of keeping employee information in box files. It is user friendly and easy to use and meeting the current organizational level. Our system includes many different features which allow the user to both efficiently navigate our website using our navigation bar as well as manage their business or organization's employee data, these features are divided amongst the five different sections accessible from the home page using the navigation bar Home is where the website url will initially lead the user from there the user can click About Us to see information regarding the group members, Contact Us to view the location and contact

information of Win Data Solution Systems[®], Learn More to view additional information regarding Win Data Solution Systems[®] employee management system and an attached video and linked website to help user's decide whether it is a good option for their business or organization, finally Manage Data allows the user to utilize Win Data Solution Systems[®] employee management system and its many features which are outlined below along with the other features of the website:

1. Designed and Created a footer at the very top of the page that provides quick link to the Instagram and Facebook with dark blue background color.

f⊡

2. Designed and created the Home Page for the web-based Application with an image float on the left and heading float right next to the image to welcome the user with simple description of the system.



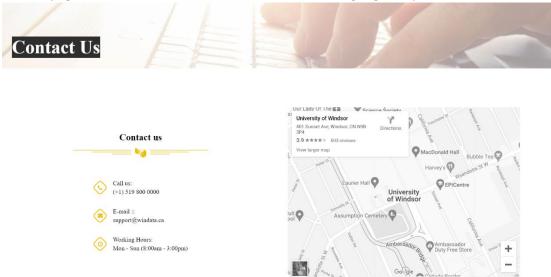
Welcome to Win Data Solution System. Manage Employee Data Easily!

3. Designed and created the About us Page that has footer with a background image and about us text. The about us page include information regards the team member with team member's image and information.





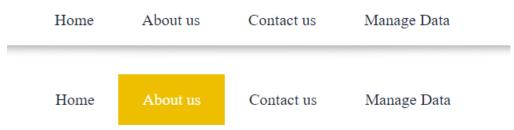
4. Designed and created the Contact page with a background image and contact us text. The contact page includes contact information and embedded google map for the location



5. Designed and Created Top footer that includes the business email, phone number, operation hour and there is an icon that next to each corresponding information. The team's designed project icon is also place in top middle of this footer.



6. Designed and created navigation to other page including Home, About us, Contact us and Manage Data. The background is white while the word is in black. However, once the mouse is on the word the background of that word will turn yellow and the word will turn from black to white.



7. Designed and created a Quick Link footer at the bottom of the page with dark blue background color that includes quick access internal link to Home, Contact, About page. Once the mouse is hover over the text the color will change from white to yellow



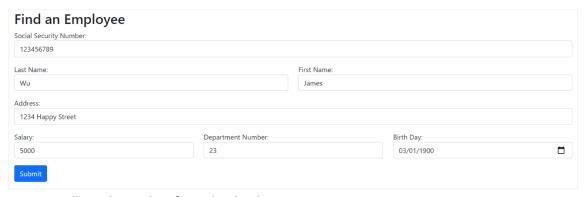
8. Designed and created a Follow Us footer at the bottom of the page with dark blue background color and includes quick access internal link to Facebook and Instagram page that allow user to open. Once the mouse is hover over the text the color will change from white to yellow



9. Designed and created a copyright footer at the very bottom of the page with a different color for the name of our team project with an internal link to open once click on the project name.

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10. Application accepts as input a social security number of an employee and prints some information (such as the employee's Lname, Fname, address, salary) from the Employee record stored in the database. The program is run through a web browser interface.



11. Retrieves all employee data from the database.

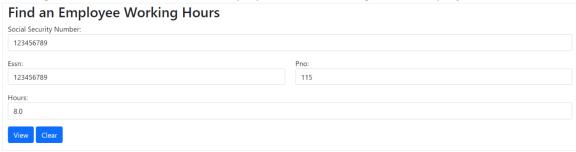
Print All Employee

Fname	Lname	Ssn	Bdate	Addr	ess	Salary	Dno
James	Wu	123456789	1900-03-01	1234	Happy Street	5000	23
Abi	Jack	756123850	1901-01-05	1618	Gogo Street	2000	19
Aaron	Walker	746125852	1903-02-01	1842	Rage Street	3000	20
Abi	Jack	756123850	1901-01-05	1618	Gogo Street	2000	19
Aaron	Walker	746125852	1903-02-01	1842	Rage Street	3000	20
Kim	Wallen	123452146	1950-01-05	1111	Meridian Street	5500	13
Maddy	Balcom	452146985	1950-06-01	1364	Geroge Street	4000	11
Fiona	Fuserlier	601459631	1906-07-01	2461	Brown Street	5000	68
Colin	Parnell	146857039	1901-01-08	1046	Yonge Street	2500	43
Dave	Siu	129468521	1913-01-07	1918	Starforce Street	5000	82
Geroge	Chen	326485014	1926-04-01	1224	James Street	5000	34
Jim	Wong	214035821	1921-09-08	1334	Hanna Street	5000	10
fdshflq	fi	555444666	2021-11-07	5641	asdsq	5000	10
Subm	it						

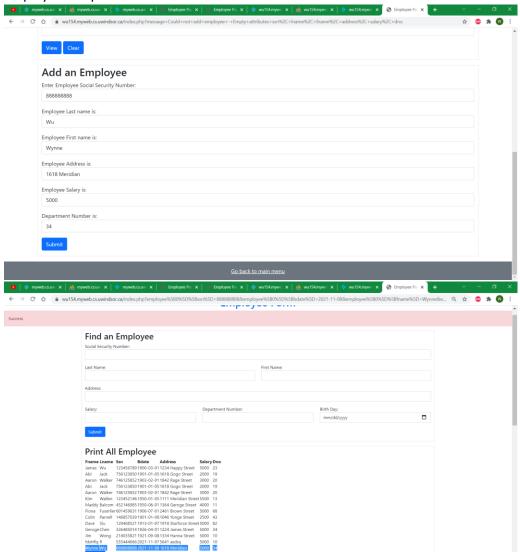
12. Finds all projects worked on by an employee whose social security number is given. If the entered employee social security number is invalid or the employee does not work on any project then the web browser will output No Employee Found or Employee does not work on any Project.

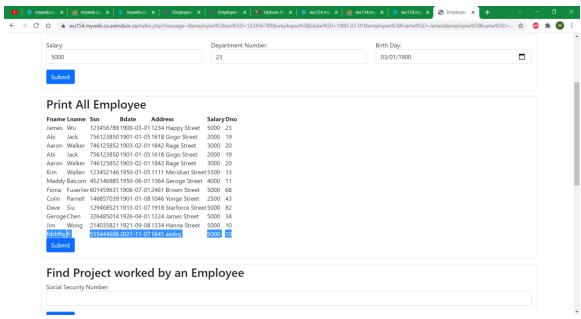


13. Find Working Hour information for an Employee by using employee's social number. The working hours information includes employee's Essn, working hours and project number.

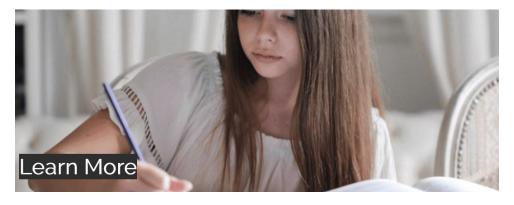


14. Add a menu for allowing user to add employee with employee's information such as employee's social number, employee last name, employee first name, employee address, employee salary, employee's department number.





15. Designed and created the Learn More page with a background image and company information text. The Learn More page includes embedded YouTube Video

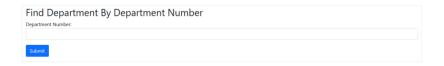


Here at Win Data Solution System we pride ourselves on offering the very best in employee managment systems and helping buisnesses and organizations to easily manage their human resources in an easy and effective manner.

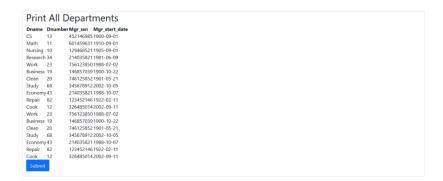
To learn more about the importance of our employee managment systems as well as to see if they are the best fit for your buisness or organization feel free to watch the attatched video or please click the link here.



16. Find Department Using Department Number



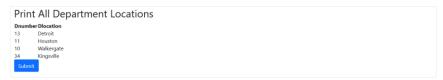
17. Print All Departments



18. Find Department Location Using Department Number



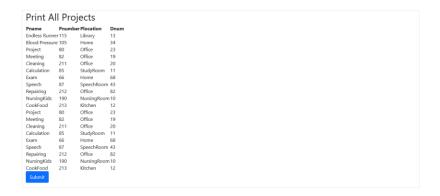
19. Print All Department Locations



20. Find Project by Department Number



21. Print all Projects



22. Find Project Worked on by an Employee Using SSN



23. Find an Employee's Working Hours Using SSN



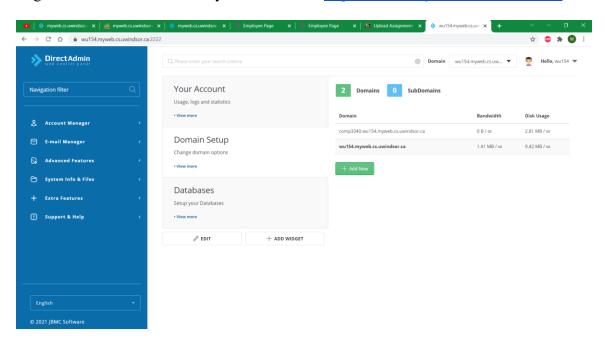
24. Return to Main Menu and Refresh Page



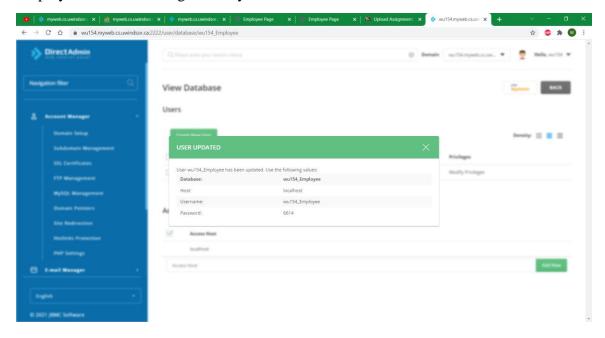
Installation Guide

1. Step 1

Login on DirectAdmin and set your domain to "https://userid.myweb.cs.uwindsor.ca/".

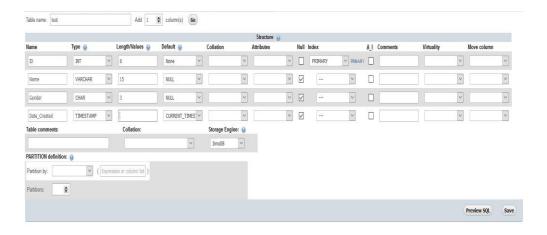


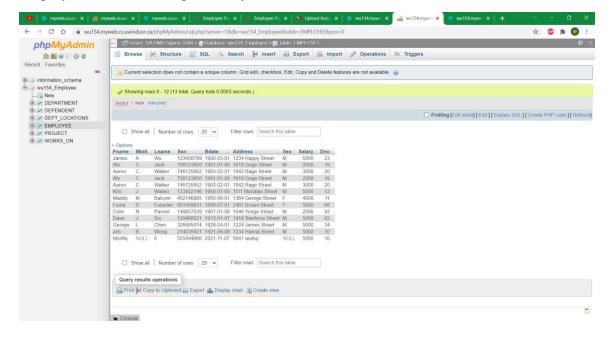
2. Create a Database and set the database name



Here is a sample screenshot of database set up information.

3. Create Table for a Database through DirectAdmin then insert the data through SQL Statement

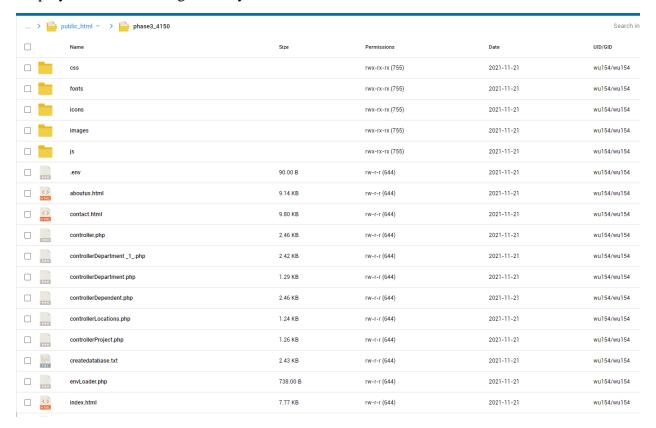




Sample database data shown in above

4. Accessing Domain File

Go on DirectAdmin dashboard and click "System Info & Files" then File Manager. Upload the file in the public_html folder



Here is a screenshot of my domain set up. My domain includes the index, php, index.html, abouthtml, contact.html, controller.php, .env, envLoader.php, model.php, viewHour.php and viewProject.php and another folder called css, fonts, js Employee Page_files that contain my css, image, font and jason file. They all are required our Employee Records Management System to work properly.

5. Website Set up

 Make sure the file structure has your app folder, index.php, .env, and .htaccess at the same level

- In .env is where your database information for connect resides. Add your DB_HOST,
 DB_USER, DB_NAME, and DB_PASSWORD that matches the database credentials.
- 3. In index.php is where the root of your site begins. Under the comment *Routes List* add the routes to your site.

7. Access The Website!

https://wu154.myweb.cs.uwindsor.ca/phase3_4150/

All Files Involved in The Applications and Their Functions and Relationships

We have a controller.php file for running the program that accesses the employee table on our company database. We also have two controllerDepartment.php files, which both deal with different functions within the index.php file. Both controllerDepartment.php access the department table that's in the company database. Furthermore, controllerDependent.php is for running the program that accesses the dependent table on the company database. controllerLocation.php is for accessing the dept_locations table within the database. controllerProject.php is for accessing the project table on our company database. We also have the viewHour.php which will access both employee and work_on tables within the database. Then is the viewProject.php for which will access the employee and the project tables inside the database.

Within our index.php where each of our functions is. At this file, we call and use each controller and view files. For our function that's related to employees, we need to use the controller.php file. These functions include, find an employee, printing all employees, and adding an employee. For functions that are related to employees' dependence, which are using

the controllerDependent.php. These functions include, find the dependent of an employee, printing all dependents of each employee, and adding a dependent for an employee. Functions that are related to departments use the two controllerDepartment.php. Which are the finding department by department number and print all departments. Functions like finding department locations and printing all department locations that are related to department locations using the controllerlocations.php. Functions like finding projects by department number, printing all projects and finding projects worked by an employee are using controllerProject.php. Find projects worked by an employee using viewProject.php. Find an employee's working hours using viewHours.php.

For our home page and information pages, we have everything stored in each folder. We have a front folder that stores each of the fonts that are on our website. Icons folder for every icon that's been used. Images folder, for each image that's used and for photos of ourselves.

Inside the CSS folder is every detail for the format of our website.

User Manual And Any Other Pertinent Information

When a user clicks into our website. They will first see our home pages. Our phone number is at the very left corner. On the right corner is the working hours. The logo is in the middle. There are five tags, Home, About us, Contact us, Learn More, and Manage Data. At the bottom of our home page, there are Quick Links for every information same as the tags above. Also, there is Follow Us which includes Facebook and Instagram subscriptions.

When clicking into About us there are each of our group members and pictures of ourselves. Wynne Wu, 4th Year Computer Science student at the University of Windsor. Isabelle Wang, 4th Year Computer Science student at the University of Windsor. Anthony Sholy, 4th

Year Computer Science student at the University of Windsor. When clicking into Contact us there is our phone number, email, and working hours. Also, a map that shows our location. By clicking the view larger map will lead to Google Maps, and the user can navigate to our location. On the Learn more page users can see details of what we do. Which we pride ourselves on offering the very best in employee management systems and helping businesses and organizations to easily manage their human resources in an easy and effective manner. Also, a "click the link here" to lead to more information about employee management systems. On the right side of everything, there's a YouTube video of what is a human resource management system. In the end, there is the Manage Data, where will show every applications and function that we created using PHP and HTML.

System Designers and Their Contributions

Team Member	Contribution
Wynne Wu	Organize the group work and monitor everyone's work
Project Team Leader	progress by communicating with the team members
	Provide guidance to the members in the group.
	Setting deadline for everyone's tasks to ensure that project
	remains on the schedule
	Set up and arrange the meetings with the group members
	Review the team member's work to make sure there is
	nothing goes wrong and meets the project requirements

	•	Created and designed various functionality for this Employee	
		Data Management System Web Interface Project. Created 13	
		functionalities in total.	
	•	Completed the title page, running head, table of content,	
		purpose of application, installation guide, features of the	
		system, system designers and their contributions and	
		database schema for the project report.	
Isabella Wang	•	Created and designed various functionality for this Employee	
Team Member		Data Management System Web Interface Project	
	•	Completed tasks assigned by team leader as promised and on	
		time.	
	•	Review the team member's work to make sure there is	
		nothing goes wrong and meets the project requirements	
	•	Attend the project meeting and express their opinions	
		regards the project	
	•	Completed the installation guide, listing of all files involved	
		in the application and their functions, and relationships to	
		each other, and user manual and any other pertinent	
		information for the project report.	
Anthony Sholy	•	Created and designed various functionality for this Employee	
Team Member		Data Management System Web Interface Project	
	•	Completed tasks assigned by team leader as promised and on	
		time.	

Review the team member's work to make sure there is nothing goes wrong and meets the project requirements
 Attend the project meeting and express their opinions regards the project
 Completed summary of interface and features of the system for the project report.

Database Schema

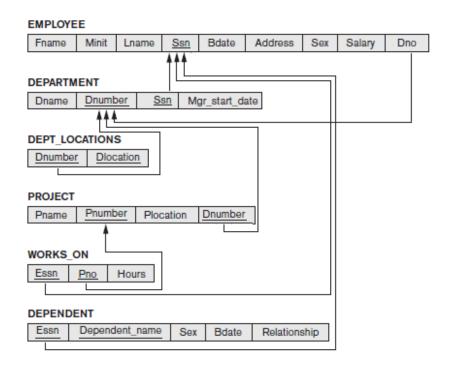


Table	Create Table		
	CREATE TABLE `DEPARTMENT` (
DEPARTMENT	`Dname` varchar(15) NOT NULL,		
	`Dnumber` int(11) NOT NULL,		
	`Ssn` char(9) NOT NULL,		

	`Mgr_start_date` date NOT NULL		
)		
	CREATE TABLE `DEPENDENT` (
	`Essn` char(9) NOT NULL,		
	`Dependent_name` varchar(15) NOT NULL,		
DEPENDENT	`Sex` char(1) NOT NULL,		
	`Bdate` date NOT NULL,		
	`Relationship` varchar(8) NOT NULL		
)		
	CREATE TABLE `DEPT_LOCATIONS` (
DEPT_LOCATIONS	`Dnumber` int(11) NOT NULL,		
	`Dlocation` varchar(15) NOT NULL		
)		
	CREATE TABLE `EMPLOYEE` (
	`Fname` varchar(20) NOT NULL,		
	`Minit` char(15) DEFAULT NULL,		
	`Lname` varchar(20) NOT NULL,		
EMPLOYEE	`Ssn` char(9) NOT NULL,		
	`Bdate` date NOT NULL,		
	`Address` varchar(30) NOT NULL,		
	`Sex` char(1) DEFAULT NULL,		
	`Salary` decimal(10,0) NOT NULL,		

`Dno` int(9) NOT NULL				
CREATE TABLE `PROJECT` (
`Pname` varchar(15) NOT NULL,				
PROJECT Pnumber` int(11) NOT NULL,				
`Plocation` varchar(15) NOT NULL,				
`Dnum` int(11) NOT NULL				
)				
CREATE TABLE `WORKS_ON` (
`Essn` char(9) NOT NULL,				
WORKS_ON Pno` int(11) NOT NULL,	`Pno` int(11) NOT NULL,			
`Hours` decimal(3,1) NOT NULL				

Summary of Interface

Our interface is designed to provide our users with a seamless experience with navigating our posted company information as well as accessing our employee management system. Our interface is very user oriented and all pertinent information is sectioned off and available using either our quick links or the navigation tabs which are easily visible while browsing the website. The company's contact information, hours of operation as well as social media links are also readily available at the top of the website. Included in our interface is a home page which depicts our company logo along with a welcoming greeting introducing new users to our employee management system. There is an about section which depicts our group members along with

photos and some basic information about each of them, a contact us section contains more information for users interested in our employee management system or requiring technical support, it also includes an address and map of our area of operation. Our interface also includes a learn more section which delves further into our company goals as well and information pertaining to our employee management system which can help users learn more about its application and help them to decide whether it is the right fit for their business/organization. Finally, the last section manage data allows users to utilize the employee management system allowing them to do things like finding an employee using SSN, printing all current employees, adding a new employee, finding the department of an employee, printing all the dependents of each employee, adding a new dependent for an employee, finding department using department number, printing all departments, finding department location using department number, printing all department locations, finding project by department number, printing all projects, finding project worked on by an employee using SSN, finding an employee's working hours using SSN, returning to main menu and refresh page, as well as many other features useful to businesses and organizations looking to effectively manage their employee data.